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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,609	10/12/2001	Michael R. Harrell	GP-300439	8742

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EXAMINER	
LEE, PING	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/975,609	HARRELL ET AL.	
	Examiner	Art Unit	
	Ping Lee	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/12/01*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/12/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: "28" as specified at the end of p. 6. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: "32" as specified on line 24 of p. 9 should be corrected as –12--.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: the output end of a cable removably connected to the audio generating component as specified in claim 1.

Claim Objections

4. Claims 1-8 are objected to because of the following informalities: the phrase "the audio broadcast signal" on lines 12 and 15 respectively should be corrected as –the radio broadcast signal--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Easley et al (US 5,361,305).

Regarding claim 9, Easley et al (hereafter Easley) disclose a method for determining the presence of an audio speaker (13-16) in a vehicle having an audio speaker (13-16) connected to an audio generating component (12) that can receive radio signals (col. 2, line 44), the method comprising the steps of: placing a microphone (46) in the vehicle (10); transmitting a computer-controlled radio signal to the vehicle (RF generator 42 is controlled by the computer 30, the radio signal is transmitted through antenna 44 to the vehicle 10); receiving the radio signal at the audio generating

component (through 22); converting the radio signal to an audio signal (although not clearly shown, the radio 12 inherently performs demodulation converting the radio signal to an audio signal); outputting the audio signal from the speaker (13-16); detecting the speaker audio signal at the microphone (col. 3, lines 2-4); and analyzing the detected signal for speaker presence (col. 4, lines 29-32; the signal received by the microphone determines the speaker presence).

Regarding claim 10, Easley shows that more than one speaker (13-16) is in the vehicle (10) and connected to the audio generating device (12), further comprising the step of selecting at least one speaker (13-16) for determination of presence and operable connection to the audio output component (12) (col. 4, line 25-38).

Regarding claim 11, Easley shows that the transmitting step comprises transmitting a predetermined modulated signal (col. 2, line 62 and col. 4, lines 21-22).

Regarding claim 12, Easley shows that the detected signal (from 46) is compared (by 76) to the transmitted signal ("REF" is the representation of the transmitted signal) and a resulting waveform are analyzed (by 78s through 90) for speaker presence (col. 4, lines 29-32; if no signal received by the microphone, the speaker presence is determined to be negative) and speaker performance (col. 3, lines 28-30).

Regarding claim 13, Easley shows that the speaker performance is one of not present (if no signal received by the microphone, the speaker presence is determined to be negative), present and performing below a first predetermined value or range, present and performing at a predetermined nominal value or range,

and present and performing above a second predetermined value or range.

Regarding claim 14, Easley shows that there is more than one speaker (13-16) in the vehicle (10) and connected to the audio generating component (12), the presence of more than one speaker is determined (by the testing procedure as shown in Fig. 3A).

Regarding claim 15, Easley disclose a method for determining the performance level of an audio speaker (13-16) in a vehicle (10) having an audio speaker (13-16) connected to an audio generating component (12) that can receive radio signals (col. 2, line 44), the method comprising the steps of: placing a microphone (46) in the vehicle (10), transmitting a computer-controlled radio signal to the vehicle (RF generator 42 is controlled by the computer 30, the radio signal is transmitted through antenna 44 to the vehicle 10); receiving the radio signal at the audio generating component (through 22); converting the radio signal to an audio signal (although not clearly shown, the radio 12 inherently performs demodulation converting the radio signal to an audio signal); outputting the audio signal from the speaker (13-16), detecting the speaker audio signal at the microphone (col. 3, lines 2-4); and analyzing the detected signal for at least one of speaker presence (col. 4, lines 29-32; if no signal received by the microphone, the speaker presence is determined to be negative) and speaker performance (col. 3, lines 28-30).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easley in view of Odemer (US 4,881,910).

Regarding claim 1, Easley et al (hereafter Easley) discloses a system that determines the presence of an audio speaker (13-16) connected to an audio generating component (12) that can receive radio signals in a vehicle (10), the apparatus comprising: a computer (30) having a memory and a microprocessor (although not clearly shown, the memory and the microprocessor are inherently included in a computer), a display (although not clearly shown, a display is inherently included connected to the computer) connected to the computer (30); a signal processor (38,48) that outputs a frequency sweep in response to a request from the computer; a radio frequency generator (42) that is controlled by the computer (through 38), whereby said radio frequency generator receives operating instructions from

the computer (through 38) and receives the frequency sweep (40) from the signal processor (38, 48) and outputs a radio broadcast signal (to 44); a cable (24) that receives the radio broadcast signal at a receive end (attached to 22) and carries the radio broadcast signal to an output end (attached to 12), whereby the audio generating component (12) receives the radio broadcast signal from the output end of the cable (24) and outputs the received signal to the audio speaker (any one of 13-16) and the audio speaker outputs the received signal and emits an audio signal; a microphone (46)placed in the vehicle and connected to the signal processor (38, 48) that detects the emitted audio signal, said signal processor (38,48) processes the signal (52) and the emitted audio signal (from 46) and outputs a waveform (from 90) to the computer (30); and a program stored in the memory that analyzes the waveform from the signal processor (38,48) and determines the presence of a speaker according to predetermined rules (col. 2, lines 25-27). Although Easley fails to clearly show the program, the program is inherently included in the computer to receive the waveform from the signal processor (38,48). Based on this received waveform, the computer will generate "PASS" or "FAIL" code based on the interpretation (reads on the claimed predetermined rules) of the waveform.

Easley fails to show the output end of the cable removably connected to the audio generating component. Easley teaches a general radio in a vehicle without specifying all the wire connection. It was well known in the art that the radio on a vehicle could be removed for replacement or service. Odemer teaches a radio in a vehicle. Odemer clearly illustrates how a radio is connected to all other components,

include the antenna cable (22). Thus, it would have been obvious to one of ordinary skill in the art to modify Easley by replacing the radio with the one as taught in Odemer in order to enable to user to easily disconnect the radio for servicing.

Regarding claim 2, Easley shows at least two speakers.

Regarding claim 3, although Easley fails to show DSP as the signal processor (38, 48), one skilled in the art would have expected that a DSP could perform the function as shown in Fig. 2 of Easley. Easley does not limit the signal processor as being analog or digital. Thus, depending on the cost and preference, it would have been obvious to one of ordinary skill in the art to modify Easley in view of Odemer by replacing the signal processor with a DSP in order to generate the testing signal.

Regarding claim 4, Easley's system in view of Odemer has the cable output end removably (the cable 24 is wirelessly connected to the antenna 44) connected to a transmitting antenna (44) and the radio broadcast signal is received at the transmitting antenna (44) and a receive antenna (22) receives the radio broadcast signal and the receive antennal coupled to the audio generating component (12).

Regarding claim 5, Easley shows the radio.

Regarding claim 6, Easley shows the modulated signal (from 42).

Regarding claim 7, Easley detects the presence of more than one speaker after testing each and every speaker in the car.

Regarding claim 8, Easley can determine the proper speaker operation (col. 3, lines 28-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 703-305-4865. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ping Lee
Primary Examiner
Art Unit 2644

pwl